

Contents

Letters to the Editor

Observation of the H II galaxy giving origin to the $z=0.3930$ absorption system of the QSO 1209+107

Cristiani, S.

L1

Detection of a heavy radical in IRC+10216: The hexatriynyl radical C_6H ?

Guélin, M., Cernicharo, J., Kahane, C., Gomez-Gonzalez, J., Walmsley, C.M.

L5

EXO 023432-5232.3: a new 114-minute probable AM-Her-
culis-type binary

*Beuermann, K., Thomas, H.C., Giommi, P.,
Tagliaferri, G.*

L9

A new pulsating DA white dwarf: PG 2303+243

Vauclair, G., Chevreton, M., Dolez, N.

L13

Extragalactic astronomy

Deprojection of the de Vaucouleurs $r^{1/4}$ brightness profile

Mellier, Y., Mathez, G.

1

The distribution of H I in the lenticular galaxy NGC 2787

Shostak, G.S.

4

Alignments of galaxies in the Perseus supercluster

Vettolani, G., Baiesi Pillastrini, G.C.

9

Star formation in nuclei of S0/E galaxies

Rocca-Volmerange, B., Guiderdoni, B.

15

Late-type galaxies. The shapes of the spiral arm filaments
(Text in German)

Isserstedt, J., Schindler, R.

23

Determination of the radii of Cepheids. IV. Dimensions of
HV 879, HV 899, HV 909, HV 2257, HV 2338, HV 2827
and the distance of the Large Magellanic Cloud (Text in
French)

Imbert, M.

30

The central X-ray source in M 33

Gottwald, M., Pietsch, W., Hasinger, G.

45

Galactic structure and dynamics

The influence of massive molecular clouds in the evolution
of the velocity dispersion of stars in the galactic disk

Semenzato, R.

50

Stellar clusters and associations

A population of faint blue stars in a southern external part
of the Large Magellanic Cloud

Pierre, M.

54

Formation, structure and evolution of stars

Absolute dimensions of eclipsing binaries. XII. TZ Men-
sae

Andersen, J., Clausen, J.V., Nordström, B.

60

Search for optical bursts from gamma-ray bursters. I

*Hudec, R., Borovička, J., Wenzel, W., Atteia, J.-L.,
Barat, C., Hurley, K., Niel, M., Vedrenne, G.,
Evans, W.D., Fenimore, E.E., Klebesadel, R.W.,
Laros, J.G., Cline, T., Desai, U., Teegarden, B.,
Estulin, I., Zenchenko, V., Kuznetsov, A., Kurt, V.*

71

Forced oscillations in a rotating star: low frequency gravity
modes

Rocca, A.

81

The influence of O- and B-stars on star birth rate

Nepveu, M.

91

Stellar evolution with turbulent diffusion mixing. VI. The
solar model, surface ^7Li and ^3He abundances, solar neutri-
nos and oscillations

Lebreton, Y., Maeder, A.

99

The viscosity-surface density relation and implications for
the early rise of dwarf novae outbursts

Meyer-Hofmeister, E.

113

Multiple close frequencies of the Delta Scuti star θ^2 Tau

*Breger, M., Huang Lin, Jiang Shi-yang, Guo Zi-he,
Antonello, E., Mantegazza, L.*

117

Influence of the perturbation of the Reynold tensor on the
stability of the solar 5-minute oscillations

Gabriel, M.

125

Contribution to the study of F, G, K, M binaries. IV. Or-
bital elements of the spectroscopic binary HD 23838 (Text
in French)

Pédoussaut, A., Carquillat, J.M., Ginestet, N.

136

High-energy gamma-ray and hard X-ray observations of
Cyg X-3

*Hermesen, W., Bennett, K., Bloemen, J.B.G.M.,
Buccheri, R., Jansen, F.A., Mastichiadis, A., Mayer-
Hasselwander, H.A., Özel, M.E., Pollock, A.M.T.,
Strong, A.W.*

141

Erratum: Absolute dimensions of eclipsing binaries. III.
KW Hydrae: a detached Am system with unequal compo-
nents

Andersen, J., Vaz, L.P.R.

355

Erratum: Influence of abundances on mass-loss determination for WC stars

van der Hucht, K.A., Cassinelli, J.P., Williams, P.M. 356

Stellar atmospheres

The ultraviolet spectrum of the peculiar emission-line star GG Carinae

Brandi, E., Gosset, E., Swings, J.-P. 151

SiO maser emission in evolved stars: relation to IR continuum

Bujarrabal, V., Planesas, P., del Romero, A. 164

White dwarfs with metallic line spectra

Liebert, J., Wehrse, R., Green, R.F. 173

Radio outbursts in HR 1099: quantitative analysis of flux spectrum and intensity distribution

Klein, K.-L., Chiuderi-Drago, F. 179

Diffuse matter in space (including HII regions and planetary nebulae)

Extinction curves and intrinsic colours in local and distant OB complexes

Kretowski, J., Strobel, A. 186

IR observations of a star-forming region in M 17

Felli, M., Stanga, R. 193

First observations with the scanning Fabry-Perot interferometer CIGALE: the stellar wind bubble N 62 B in the Large Magellanic Cloud

Laval, A., Boulesteix, J., Georgelin, Y.P., Georgelin, Y.M., Marcelin, M. 199

The O6.5f?p star HD 148937 and its interstellar environment

Leitherer, C., Chavarría-K., C. 208

VLA hydrogen and helium 76 α line observations of Sagittarius B 2

Roelfsema, P.R., Goss, W.M., Whiteoak, J.B., Gardner, F.F., Pankonin, V. 219

Herbig-Haro emission in two bipolar reflection nebulae

Neckel, T., Staude, H.J., Sarcander, M., Birkle, K. 231

The Sun

Determination of velocity and magnetic fields from observational data in solar active regions

Berton, R. 238

Analysis of solar eclipse data: spicule model in the middle chromosphere

Cuny, Y. 243

The quasi-linear relaxation and bremsstrahlung of thick target electron beams in solar flares

McClements, K.G. 255

Observations of oscillatory phase-shifts with diode arrays

Staiger, J. 263

Microwave emission of solar electron beams

Stähli, M., Benz, A.O. 271

Semi-empirical models of a quiescent prominence

Zhang, Q.Z., Fang, C. 277

Are solar radio fluctuations real?

Benz, A.O., Fürst, E. 282

The solar system

Localization of Io and non-Io sources of Jovian decameter emission

Boischot, A., Sastri, J.H., Zarka, P. 287

Interpretation of F-corona radial velocity observations

Shestakova, L.I. 289

Celestial mechanics and astrometry

Three characteristic orbital parameters for the Trojan group of asteroids

Bien, R., Schubart, J. 292

Trojan asteroids: relations between dynamical parameters

Schubart, J., Bien, R. 299

Computation of the first and second derivatives of the Lagrange equations by harmonic analysis (Text in French)

Simon, J.-L. 303

Physical and chemical processes

Neutrino-antineutrino annihilation around a collapsar

Berezinsky, V.S., Prilutsky, O.F. 309

Instruments, data processing, and computational methods

High-resolution astronomical imaging by roll deconvolution of Space Telescope data

Müller, M., Weigelt, G. 312

The IRAM 30-m millimeter radio telescope on Pico Veleta, Spain

Baars, J.W.M., Hooghoudt, B.G., Mezger, P.G., de Jonge, M.J. 319

A multichannel multicolour photometer for high time resolution

Barwig, H., Schoembs, R., Buckenmayer, C. 327

Astronomical optics: zonal aberration correction. Laboratory experiments and extrapolations to space- and ground-based observations

Artzner, G. 345

(RN) The feasibility of periodicity searches in gamma-ray astronomy

Buccheri, R., Ozel, M.E., Sacco, B. 353

Abstracts of articles which have been published in A. & A. Suppl. Ser. 67, No. 3

Deep photometry of globular clusters. VI. E2 and E3

Gratton, R.G., Ortolani, S. 357

0.6 GHz mapping of extended radio galaxies. I. Edge-brightened double sources

Jägers, W.J. 357

Radial velocities of southern stars obtained with the photoelectric scanner CORAVEL. VI. 233 F to M type stars in and near the Small Magellanic Cloud. Comparison

with 80 spectrographic radial velocities of O to K type stars in this Galaxy	
<i>Maurice, E., Andersen, J., Ardeberg, A., Bardin, C., Imbert, M., Lindgren, H., Martin, N., Mayor, M., Nordström, B., Prévot, L., Rebeirot, E., Rousseau, J.</i>	358
Search for (globular) clusters in M31. IV. Candidates in a $3^\circ \times 3^\circ$ square field centred on M31	
<i>Battistini, P., Bònoli, F., Braccesi, A., Federici, L., Fusi Pecci, F., Marano, B., Börngen, F.</i>	358
VBLUW observations of Pleiades G and K dwarfs	
<i>Van Leeuwen, F., Alphenaar, P., Meys, J.J.M.</i>	359
Astrometric positions of comet Giacobini-Zinner in 1985	
<i>Barbieri, C., Kranjc, A., Scardia, M.</i>	360
A survey of the neutral atomic hydrogen in M33	
<i>Deul, E.R., van der Hulst, J.M.</i>	360
Spectroscopic observations of genuine and misclassified planetary nebulae	
<i>Sabbadin, F., Falomo, R., Ortolani, S.</i>	360
Strömgren and $H\beta$ photometry of early type stars in north- ern open clusters. I. NGC 7039, NGC 7063	
<i>Schneider, H.</i>	361
Quasar candidates in the field of SA 94. II. Objective-prism classification of the US objects	
<i>Barbieri, C., Cristiani, S., Iovino, A., Nota, A.</i>	361
Anomalous Zeeman effect: moments and expansion coef- ficients	
<i>Mathys, G., Stenflo, J.O.</i>	361